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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/684,712 | 10/06/2000 | Thomas J. Quigley | 33840/LTR/B600 | 6803 |

7590 06/07/2004

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EXAMINER

BOAKYE, ALEXANDER O

| ART UNIT | PAPER NUMBER |
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2667

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/684,712

Applicant(s)

QUIGLEY ET AL.

Examiner

ALEXANDER BOAKYE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2000.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 10-12 and 18-24 is/are allowed.
6) ☒ Claim(s) 1 and 13 is/are rejected.
7) ☒ Claim(s) 2-9 and 14-17 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2-5,10.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent # 3,839,678) in view of Laubach et al. (US Patent # 6,028,860).

Regarding claim 1, Bell discloses a frequency controllable oscillator (column 4, line 1); a demodulator for receiving messages representative of the system frequency (demodulator is inherently at the receiver end to enable receiver reconstruct the original signal received); a comparator for generating an error signal representative of the difference between the oscillator frequency and the system represented by the message (column 4, lines 22-32); a loop filter having an input to which the error signal is applied and an output that is applied to the oscillator to control its frequency (column 15, lines 19), the loop filter having initial coefficients that define a large bandwidth ; and a controller that adjust the loop filter to have coefficients that define a small bandwidth when the error signal drops below a threshold level(column 6, lines 6-11; the claimed controller corresponds to signal controlled oscillator block 11 of Fig. 1).

Bell differs from the claimed invention in that Bell does not teach a cable modem connected to a cable transmission system to communicate with a cable modem termination system. However, Laubach teaches a cable modem (column 23, lines 6-7) connected to a cable transmission system to communicate with a cable modem termination system(column 3, lines 48-54). The claimed master clock is inherently in the cable network of Laubach. One of the ordinary skill in the art would have been motivated to incorporate a cable modem into the communication network of Bell in order to interface user's PC to 6Mhz TV channel. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a cable modem such as the one taught by Laubach into the communication network of Bell with the motivation being that it provides capability for the system to offer high speed data services to users.

2. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laubach et al. (US Patent # 6,028,860) in view of Gorman et al. (US Patent # 6,137,793).

Regarding claim 13, Laubach teaches a cable modem termination system (column 23, lines 6-7) comprising: a downstream data queue that has frame boundaries between portions of the data in the queue (column 21, line 66-column 22, lines 1-3); a downstream processor (column 23, lines 15-16) that formats data from the queue into a data stream; and a downstream transmitter connected to the downstream processor (column 23, lines 15-23; see 717 and 1708 of Fig. 20) to send the formatted data. Laubach differs from the claimed invention in that Laubach does not disclose a time stamp generator for synchronizing cable modems to each other and time stamp send

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generator to insert time stamp messages from the time stamp generator into the data stream responsive to the time stamp send commands. However, Gorman discloses a time stamp generator for synchronizing cable modems to each other and time stamp send generator to insert time stamp messages from the time stamp generator into the data stream responsive to the time stamp send commands (column 14, lines 59-column 15, lines 1-9; column 23, lines 55-62 ; 404 of Fig. 4 corresponds to the claimed time stamp send generator). One of ordinary skill in the art would have been motivated to incorporate a time stamp generator into the communication network of Laubach in order to provide synchronization. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a time stamp generator such as the one taught by Gorman into the communication network of Laubach with the motivation being that it provides capability for the system to synchronize the transmitter with the receiver.

Allowable Subject Matter

3. Claims 2-9 and 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10-12,18-21 and 22-24 are allowable.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 10-12, the prior art of record does not teach a timing offset detector for generating a timing offset message representative of the transmission time delay between the cable modem and the CMTS; an upstream transmitter for transmitting data

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in the queue on the upstream channel when the time stamp message and the timing offset message identify time slots that match the time slots specified by the MAP messages. As to claims 18-21, the prior art of record does not teach adding the time stamp message and the timing correction message to define time slots for upstream transmission from the subscriber stations. As to claims 22-24, the prior art of record does not teach means responsive to the local clock at each cable modem for generating a continuously incremented local clock timing signal; means at each cable modem for adding the timing correction message to the local clock timing signal to produce a time slot defining signal corrected for the particular cable modem.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (703) 308-9554. The examiner can normally be reached on M-F from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378. The fax number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-4750.

Alexander Boakye

Patent examiner

AB

5/27/04


CHI PHAM
SUPERVISORY PATENT EXAMINER
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6/1/04